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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,784	06/05/2006	Masahiro Kozakai	500615.20294	5496
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EXAMINER				
SMITH, LINDA B				
ART UNIT		PAPER NUMBER		
2862				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/581,784

**Applicant(s)**

KOZAKAI ET AL.

**Examiner**

LINDA B. SMITH

**Art Unit**

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 3-4 is/are allowed.  
6) ☒ Claim(s) 1 and 2 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 23 October 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Amendment A, received on 10/23/08 has been entered into record. Claims 1 and 3-4 have been amended.
2. Claims 1-4 are now pending.

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

4. The drawings were received on 10/23/08. These drawings are acceptable.

***Response to Amendment***

5. Applicant's amendment, see page 7, filed 10/23/08, with respect to specification have been fully considered and are persuasive. The objection of 7/25/08 has been withdrawn.

***Response to Arguments***

6. Applicant's arguments, see 8-10, filed 10/23/08, with respect to the rejection(s) of claim(s) 1 and 2 under 102(e) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference.

*Allowable Subject Matter*

7. Claims 3 and 4 are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest in combination as claimed a manufacturing method for manufacturing the lens drive device which moves one half of the case body and the other half case body such that a spacer is sandwiched between and then removed. When the spacer is removed the gap between the regulating part and the lens-barrel holder is set.

*Claim Rejections - 35 USC § 103*

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine et al. (US Patent No. 5,572,372 and hereinafter Sekine) in view of Yoshida et al. (US Patent No. 7,268,816 and hereinafter Yoshida).

12. As to claim 1, Sekine discloses a lens drive device comprising:

a movable lens body (63) provided with a lens (col. 6, lines 30-41 and Fig. 11A),

a drive means for moving the movable lens body in an optical axis direction of the lens (col. 6, lines 30-51), and

a fixing body (62) which movably supports the movable lens body in the optical axis direction (col. 6, lines 30-41),

wherein the movable lens body is comprised of a lens-barrel (63) provided with a lens (31) and a lens-barrel holder (64) which movably supports the lens-barrel with respect to the lens-barrel holder in the optical axis direction (col. 6, lines 30-51),

wherein the lens-barrel holder (64) comprises a first magnetic means as the drive means (col. 6, lines 43-51), wherein the fixing body (62) comprises a second magnetic means as the drive means (col. 6, lines 30-36), and

wherein the movable lens body (63) is moved by a magnetic attractive force or a magnetic repulsive force between the first magnetic means and the second magnetic means (col. 5, lines 46-60 and col. 6, lines 52-54).

*Sekine* does not explicitly disclose:

a regulating part which regulates a moving range in the optical axis direction of the lens-barrel holder, an imaging element where an image passing through the lens is formed, and

wherein the lens-barrel is relatively moved with respect to the lens-barrel holder in the optical axis direction so that a focus between the lens provided in the lens-barrel and the imaging element is adjusted.

*Yoshida* discloses a camera unit having:

a regulating part **(32,43,102,114)** which regulates a moving range in the optical axis direction of the lens-barrel holder **(abstract, col. 3, lines 18-23, col. 5, lines 18-20 and Figs. 1,5,8)** to provide a means to regulate movement of the lens barrel within the movable range as well as to control the position of the lens barrel, and

an imaging element **(21)** where an image passing through the lens is formed **(col. 3, lines 13-18)** to provide a means to process the light coming through the lens, and

wherein the lens-barrel is relatively moved with respect to the lens-barrel holder in the optical axis direction so that a focus between the lens provided in the lens-barrel and the imaging element is adjusted **(col. 3, lines 25-40)**.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the optical apparatus of Sekine with a means to adjust the focus between the lens barrel and imaging element as taught by Yoshida. To provide a means to adjust the focus through the movement of the lens barrel relative to the lens barrel holder is well known and recognized in the photographic art, since it has been held that provision of adjustability, where needed, involves only routine skill in the art.

13. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine in view of Yoshida as applied to claim 1 above, and further in view of Akimoto et al. (JP 2002-374436 A and hereinafter Akimoto).

Although the combined teachings of Sekine in view of Yoshida shows substantial features of the claimed invention (discussed in paragraphs above), they fail to disclose:

wherein the lens-barrel holder is formed in a cylindrical shape and a female screw part is formed on its inner periphery, and a male screw part is formed on an outer periphery of the lens-barrel and the male screw part is threadedly engaged with the female screw part, and the lens-barrel is moved in the optical axis direction by relatively turning the lens-barrel holder with respect to the lens-barrel.

*Akimoto* discloses a camera for portable equipment having:

wherein the lens-barrel holder is formed in a cylindrical shape and a female screw part is formed on its inner periphery (**0012**), and a male screw part (**0013**) is formed on an outer periphery of the lens-barrel and the male screw part is threadedly engaged with the female screw part, and the lens-barrel is moved in the optical axis direction by relatively turning the lens-barrel holder with respect to the lens-barrel (**0013**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the lens drive device of Sekine as modified by Yoshida with a male and female screw parts as taught by Akimoto in order to provide an alternative means to connect the lens-barrel holder and lens barrel and to stably adjust the distance between the lens and the image sensor in a focusing adjustment (**0013**).

**Prior Art Made of Record**

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Yamaguchi (US Patent No. 7,196,855) discloses an image-capturing lens and device.
- b. Hsiao (US Patent No. 7,039,309) discloses drive source of a camera lens.
- c. Goh (US Patent No. 6,784,937) discloses lens assembly of digital camera.
- d. Kaneda et al. (US Patent No. 5,828,503) discloses driving device and optical apparatus.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINDA B. SMITH whose telephone number is (571)270-3827. The examiner can normally be reached on Monday through Friday 9:00AM-6:30PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher E Mahoney/  
Primary Examiner, Art Unit 2862

/Linda B Smith/  
Examiner, Art Unit 2862